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ABSTRACT

Organizational studies traditionally take the position that the more people involved in group decision making the more ideas will be generated. Recent studies demonstrate that people have a tendency to "loaf" in group situations and thus decrease the level of effort exerted by individual group members. This paper first reviews the literature on social loafing and then analyzes the results of a longitudinal study which used brainstorming tasks. Subjects, 31 students in a small group communication course at a large midwestern university, were given individual and group brainstorming activities to complete 4 times during an 8-week period. Results indicated that subjects contributed fewer ideas in a group brainstorming activity in comparison to an individual effort on a similar task. Also, social loafing appears to occur over an extended period of time. Findings show that social loafing does appear in communication contexts and thus suggest the communicative relevance of social loafing for organizational research. (Three tables are included, and 31 references are appended.) (MS)

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Group Participation in the Organization: Social Loafing as a Limitation of Group Effectiveness

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Abstract

Organizational studies traditionally take the position that group participation "brings out the best" of its members. However, social psychologists are discovering that group participation may actually decrease the level of effort exerted by individual group members. This paper will first review the literature concerning social loafing. This paper will then present the results of a longitudinal study of social loafing using brainstorming tasks. The study found that social loafing does appear in communication contexts and produces implications for organizational research.

Group Participation in the Organization:

Social Loafing as a Limitation of Group Effectiveness

All us have participated in some task which requires the coordination of several people. Perhaps the task has been moving a piano from a house into a moving van. Invariably, seven or eight people will circle around the piano. At a given signal, all participants will bend over and grunt and grimace as the piano is hoisted into the air. Once the piano is in the moving van all of the participants publically comment about how heavy the piano was while privately thinking that they had not exerted as much energy as they had thought they would.

This same kind of phenomenon exists in the organizational context. Organizations are made up of smaller groups (Putnam, 1984). In fact, Wieck (1979) goes so far as to state that "a surprising variety of organizational phenomena are visible in and perpetuated by surprisingly small units of analysis" (p. 236). Jablin and Sussman (1983) claim that "small group behavior within organizations is acknowledged as a focal component of the study of organizational communication" (p. 11). Wieck (1979) further states that "double interacts, dyads, and triads--become eminently sensible as places to understand the major workings of organizations" (p. 236).

These small units of analysis in organizations are exposed to the same pressures as the piano movers mentioned above. They desire to accomplish the task but with as little effort as possible. The more people there are to share in the responsibility for task accomplishment the less effort each individual is likely to exert. This runs counter to the rationale organizations use for group decision making. The argument is that the more

people involved in the decision the greater the pool of ideas (Gibson, Ivancevich, & Donnelly, 1985; Jablin & Sussman, 1983). Unfortunately, this is not always the case. People have a tendency to loaf in group situations.

The study of social loafing is not new. A German psychologist named Ringelmann conducted what is probably the first study on social loafing (Dashiell, 1935). Ringelmann was attempting to establish the point where it is no longer beneficial to add more people to a group. Ringelmann found, however, that even in a simple dyad the individual members exerted less effort on the task than when working alone (Dashiell, 1935). Specifically, Ringelmann found that when one person pulled on a rope, they could pull at the force of 63 kilograms. Logically, two people pulling on the rope should exert a force of 126 kilograms. Three pullers should result in 189 kilograms of tension on the rope. Ringelmann took the effect up to eight people pulling on the rope hypothesizing that eight people should exert 504 kilograms of tension on the rope. Ringelmann found, however, that when two people pulled on the rope the tension was not 126 kilograms but rather it was 118 kilograms. Therefore when two people were pulling on the rope, each individual performed at only ninety-three percent of his or her capacity (Dashiell, 1935). When three people were pulling on the rope, Ringelmann found that they only created 160 kilograms of tension on the rope or eighty-five percent of capacity. Finally, when eight people were pulling on the rope, Ringelmann found that instead of producing 504 kilograms of pressure, those eight individuals produced only 248 kilograms or forty-nine percent of capacity (Dashiell, 1935).

Interest in social loafing has begun to resurface in recent years. This

resurgence has been led by social psychologist Bibb Latane' (1979). To date, communication scholars have acknowledged the line of research (Hirokawa & Poole, 1986) but have made no attempt to integrate social loafing into communication research. The focus of this paper is to illustrate that since groups are important to organizations, the social loafing issue deserves recognition and an awareness should be generated to avoid the negative consequences of this phenomenon such as a reduction in group effectiveness, productivity, or quality of the decision making process. This paper will first examine the recent work concerning social loafing. The results of a longitudinal study of social loafing using communicative brainstorming tasks will then be discussed indicating the communicative relevance of the phenomenon. The paper will conclude with recommendations for future analysis.

Review of the Literature

As was stated above, Latane' and his associates have revitalized the study of social loafing. It should be noted, however, that some studies which lent themselves to the study of social loafing were conducted well before Latane', Williams and Harkins' (1979) watershed article. For example, in a review of the organizational behavior literature, Porter and Lawler (1965) reported that morale, absence rates, turnover rates, accident rates, and productivity are all better in groups which are smaller in size. Of course, this could be true for any number of reasons. However, it may be attributable to social loafing in light of later studies (Bray, Kerr, & Atkin, 1978; Harkins, Latane', & Williams, 1980) which argue that social loafing increases with group size.

Shortly after Porter and Lawler's review of organizations, Wicker (1969) conducted a study concerning religious organizations. Wicker studied a number of Methodist churches in the upper-midwest and found that as the size of the congregation increased, the level of participation per person decreased. Wicker concluded that while the larger congregations appeared to be more active, it was actually members of smaller congregations who were most likely to be active. This supports the social loafing literature which has found that larger groups appear to be more productive but that smaller groups result in greater productivity per participant.

Ingham, Levinger, Graves, and Peckham (1974) conducted a replication of Ringelmann's original experiment. Unlike Ringlemann, Ingham et al. found that the effort exerted decreased up through three participants then leveled off with the addition of a fourth participant. Petty, Harkins, Williams, and Latane' (1977) found the relationship to be linear. Petty et al. asked subjects to evaluate editorials and/or poems alone, in groups of eight, and in groups of sixteen. The study produced a clear linear relationship. Groups of sixteen produced less comments per person than groups of eight. Likewise, groups of eight produced less comments per person than those working alone. They concluded that cognitive effort decreases with an increase in group size. Petty et al. concluded by specifying ways in which the effect could be overcome. Two of these suggestions became important in the social loafing literature. Petty et al. argued that the task should be clearly identified and that the task should require "costly effort."

But it was Latane', Williams, and Harkins (1979) that provided social loafing research with a great shot in the arm. First, Latane' et al.

provided the line of research with a name. Prior to the 1979 article, there was no common terminology used by the various scholars. After the Latane' et al. article, all subsequent articles would refer to the effect as social loafing. Second, although the article was not intended to be a literature review, Latane' et al. oriented the community with a review of relevant research.

Third, Latane', Williams, and Harkins (1979) introduced a methodological change which greatly influenced later studies. A major criticism of Ringelmann's work was that of "overlap." It was argued that the forces pulling on the rope may overlap and therefore cancel each other out. If this were the case, each individual would be exerting just as much effort in a group as when alone. The difference would not be in the exertion but in the measurement. Latane' et al. solved this problem by conducting a cheering experiment in which subjects sat in different rooms so that the sound could be recorded for each subject. Headphones were provided so that each person would be able to hear the other members of the group. The findings indicate that social loafing does occur and is not the result of methodological error.

Fourth, Latane' et al. provided a theoretical basis for the study of social loafing. The article refers to the social loafing effect as an anomaly to Zajonc's (1965) Social Facilitation theory which argues that the "mere presence" of another person will result in improved performance. While social loafing research does not disprove social facilitation, it does specify that there are circumstances where social loafing is more powerful than social facilitation.

In light of this anomaly, Latane' offered a second explanation. This

explanation came in the form of Social Impact theory (Latane', 1981). The basic premise of social impact theory is that there are forces which guide an individual to perform. The amount of power the force holds remains relatively constant. However, this power may be directed at one individual or a collection of individuals. Remembering that the power of the force remains constant, the intensity focused on each individual decreases with an increase in the number of individuals. Estate inheritance is a good illustration. The value of the estate is a constant. Regardless of the number of benefactors, the value of the estate remains the same. However, as the number of benefactors increases the amount that each benefactor will receive decreases. Likewise a group has a fixed number of responsibilities. The greater the size of the group, the less likely a single individual will feel burdened to fulfill any specific responsibility.

Another explanation of the social loafing effect was argued by Jackson and Harkins (1985). Jackson and Harkins argue that equity theory (Caddick, 1980; Walster, Berscheid, & Walster, 1973) is a legitimate explanation for the social loafing effect. Equity theory contends that individuals attempt to exert the same effort and receive the same output as others. If a person perceives that they are exerting more effort for the same output they will either attempt to decrease their effort or will seek to increase their rewards. Likewise, an individual will seek equity when he or she is exerting the same effort but is receiving less output, exerting less effort but is receiving the same output, or exerting the same effort but is receiving greater output. The underlying principle is that we feel uncomfortable if we are not being treated equitably.

Jackson and Harkins (1985) tested this theory by controlling the expectation of effort of each subject's partner. As was hypothesized, the subjects matched their partner's effort whether that effort was greater or less than average. The authors concluded that the reason individuals exert less effort in groups is that they expect their fellow groups members to exert less effort (p. 1204). Therefore equity theory explains social loafing by indicating that group members do not want to do any more work than their fellow group members. Since each member is expecting everyone else to loaf, they too loaf to insure an equitable relationship.

The next relevant question is "Why?" Does social loafing occur because group members are saving up their energy or because they are loafing. Harkins, Latane', and Williams (1980) addressed this issue. These scholars referred to the explanations as "allocating effort" and "taking it easy" respectively. Kerr and Bruun (1981) referred to the same explanations as "me first" and "hide in the crowd." The basic premise for the allocating effort or me first explanation is that individuals will save their energy for those trials in which it is most important for them to perform well. Those are trials in which the individual's effort is readily noticeable to all. The argument is that in these instances the person will want to perform best because it will be a reflection on his or her personality. The basic premise for the taking it easy or hide in the crowd explanation is that people will put out the least amount of effort necessary in any situation. Therefore when a person is alone, they are required to exert more effort since they are solely responsible for success. However, when in a group they will exert less effort since they know that someone else will cover for them.

Equity theory encompasses either of these explanations. One of the underlying themes of equity theory is a "me" orientation. The individual is seeking to optimize the situation for him or herself. Therefore, the individual may be inclined to save his or her maximum effort for a solo performance. Likewise, equity theory encompasses the taking it easy explanation. An individual does not wish to work any harder than necessary to maintain equity. Since the individual perceives loafing in fellow group members, the only rational action is to "take it easy." Studies conducted by Kerr and Bruun (1981) and Harkins, Latane' and Williams (1980) indicate that the taking it easy or hide in the crowd explanation is the most plausible.

Numerous studies have been conducted concerning the social loafing effect in the past five years. Jackson and Padgett (1982) studied Beatle songs written jointly by McCartney and Lennon and those written by either one alone. They found that songs written alone were more likely to have become "hits" than songs written jointly. Gabrenya, Latane', and Wang (1983) and Gabrenya, Wang, and Latane' (1985) studied Chinese students in Ohio and in Taiwan and concluded that people exhibit social striving when in a different culture and social loafing when in their own culture.

In addition, several studies have studied how to limit social loafing. Harkins and Petty (1982) found that making the task more challenging or making the task such that each person has a specific and essential role reduces social loafing. Zaccaro (1984) found that making a task appear attractive tends to override the social loafing effect. Albanes and Van Fleet (1985) suggest that adequate incentives, the use of power, and identifiability can overcome social loafing. Oxley and Barrera (1984) argue

that "undermanning," providing fewer human resources than necessary for task accomplishment, is a possible solution to social loafing in the work place. Harkins and Petty (1982) found that people are less likely to loaf on difficult tasks and tasks that appear to be unique. Unlike Harkins and Petty, Kerr and Bruun (1983) conclude that the member with the lowest ability is likely to social loaf on disjunctive tasks since on disjunctive tasks the success of the group is determined by the highest ability member. Kerr and Bruun further argue that on conjunctive tasks the highest ability member will loaf since the success of the group is dependent on the performance of the member of lowest ability. With this orientation, it may be impossible for a group facilitator to completely avoid social loafing.

Rationale

There appear to be at least two problems with the above research. First, only one study has a legitimate communication orientation (Petty et al., 1977). Yet even the Petty et al. article is concerned with group size and not communication. There have been no articles published concerning social loafing in the communication journals.

The second problem is that all of the studies cited above are single trials. Most of the studies consisted of one time ad hoc groups or of individuals told they were in groups which actually did not exist. As a result, these studies have been unable to detect any changes in social loafing which may occur as the group develops. Groups which appear in organizational contexts are frequently long standing groups. Organizational groups which are ad hoc in nature meet and develop norms. Previous research has not dealt with this issue in relation to idea generation in decision

making groups (Jablin & Sussman, 1983).

The literature review clearly indicates that minimal research has been conducted concerning how communication within groups is affected by the social loafing phenomenon. For example, given either brainstorming, nominal group, or delphi technique idea generation tasks within a small group, will social loafing affect the amount of ideas generated within a group situation? This is an important issue since communication is such an integral component contributing to the success of a group as well as groups within organizations.

Specifically, this paper will test the following hypotheses:

H 1: Subjects will contribute less ideas in a brainstorming activity given the cognitive perception of participating in a group in comparison to an individual effort on a similar task.

H 2: A longitudinal comparison of individual efforts with group efforts will verify that social loafing is consistent given repeated measures.

Method

Subjects were 31 students in a small group communication course at a major midwestern university. Subjects were given five minutes to complete an individual brainstorming activity and five minutes to complete a nominal group technique brainstorming activity four times during an eight week period. The same activity was used in the first and third data collection and the second and fourth data collection with the ordering reversed in the repeated trial to control for ordering effect. There was a two week delay between each data collection to limit learning effects. Subjects were instructed that the ideas generated in the nominal group activity would be

pooled with the other members in their group to produce a group score while the individual brainstorming activity results would be treated seperately. This proceedure is similar to that used by Brickner, Harkins and Ostrom (1986) who measured the number of thoughts generated and then pooled thoughts to measure the social loafing effect.

Each list was counted individually by the researchers to determine the number of ideas each subject generated for each task. The process was repeated with both researchers to reach consensus in case of discrepancy. Estimated coder reliabilities equal .95.

Results

Hypothesis one posited that individual list completion scores would be significantly greater than group list completion scores. This hypothesis is consistent with the social loafing research. Each subject completed both tasks on four separate occasions. Paired scores were the unit of analysis using paired comparison t-tests (see Table 1). The "Proc Means Difference" procedure provided by SAS was utilized. Specifically, one-tailed t-tests were computed for each pair of scores to determine if the individual scores were significantly greater than the group scores (see Table 2). Results for the four sets of scores collected at two week intervals were as follows: $t(1)=7.28$, $p<.00005$, $\omega^2=0.6419$; $t(2)=3.80$, $p<.00035$, $\omega^2=0.3024$; $t(3)=6.22$, $p<.00005$, $\omega^2=0.5651$; and $t(4)=1.54$, $p<.0676$, $\omega^2=0.0483$. Therefore, these results confirm the alternative hypothesis for all but the fourth data collection ($t(4)=1.54$, $P<.0676$, $\omega^2=0.0483$). This might be explained by subject fatique due to four data collection procedures occuring within an eight week time period.

insert Table 1 about here

insert Table 2 about here

The second hypothesis proposed that the social loafing phenomenon would occur over an extended period of time. To test a longitudinal social loafing effect, a composite of the four individual scores was computed for both the individual and group score conditions. Results for this one-tailed dependent t-test also rejected the null hypothesis ($t(5)=9.88$, $p<.00005$, $\omega^2=0.47$). Thus, these results suggest that social loafing exists over an extended period of time.

In computing the overall t-test utilizing the composite score, the fourth trial was included even though it was nonsignificant ($t(4)=1.54$, $p<.0676$, $\omega^2=0.0483$). This result might be due to subject fatigue. Perhaps a more plausible explanation was provided by Brickner, Harkins, and Ostrom (1986) who suggested that subjects are more motivated and attempt to attain reference group goals as ego-involvement increases toward their task group. In relation to this experiment, subjects worked in groups for eight weeks thus developing concern for their reference group. This concern may have eliminated much of the social loafing effect attributed to the previous three trials. Therefore, the fourth trial was eliminated and a one-tailed dependent t-test was computed for the composite of the first three trials ($t(6)=12.99$, $p<.00005$, $\omega^2=0.6584$). This may indicate that social loafing

decreases as group members become more involved with the group and the task at hand. These results provide implications for future research.

The first and third as well as the second and fourth data collection procedures utilized the same tasks yet, the order of presentation was reversed to avoid ordering effects. To statistically verify that the order of presentation did not bias the results of this study, post-hoc t-tests were computed for the repeated task scores. All of these t-tests produced non-significant results. This failure to reject the null hypothesis verfies that the order of task presentations did not affect the results of this study.

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insert Table 3 about here

Discussion

As the results suggest, the hypotheses were confirmed. In relation to hypothesis one, subjects contributed less ideas in a brainstorming activity given the cognitive perception of participating in a group in comparison to an individual effort on a similar task. Results concerning hypothesis two suggest social loafing appears to occur over an extended period of time. The longitudinal comparison of individual efforts with group efforts verified that social loafing is consistent given repeated measures.

The significance of these findings are manifested in two ways. First, this study clearly indicates the communicative relevance of social loafing. As was mentioned above, communication scholars have yet to study social

loafing. This study incorporated communicative tasks in the form of brainstorming activities to study social loafing. The results indicate that social loafing occurs in communication contexts. Future research might investigate implications that social loafing has for role responsibility considering the fact that organizational groups tend to possess highly defined roles due to their hierarchically embedded nature (Putnam, 1984). If one or more of these roles are assigned to a loafing member, the productivity of the group will be effected.

Another implication concerns communication networking. For example in a "wheel" network, social loafing would take on additional significance if the occupant of the hub happens to be loafing. In a chain, the loafer may have more impact in the middle of the chain since more messages are likely to be passed through the middle.

A third implication concerns communication practices which could be utilized to overcome the social loafing effect. For example, a group leader may overcome social loafing among his or her group members by emphasizing the importance of the task (Harkins & Petty, 1982). The leader may also encourage participation by specifically asking loafing members to participate. Loafing may also be overcome by the creation of appropriate norms. Rutkowski, Gruder, and Romer (1983) found that group norms have a strong impact on social loafing. These are important questions which this study brings to the forefront.

The second significant implication of this study lies in the decision making realm of the organization. As was mentioned above, organizations are increasingly relying on groups to provide the organization with the

leadership and the decision making that is necessary for survival (Gibson, Ivancevich, & Donnelly, 1985). This approach may be flawed to the extent that some groups or group members may be loafing. Brickner, Harkins, and Ostrom (1986) found that ego-involvement may be a mediating factor to overcome social loafing. Brickner et al. argue that "increasing levels of personal involvement in group work situations may be useful in increasing productivity" (p. 768). Organizational communication specialists need to be aware of this phenomenon and the strategies for overcoming social loafing such as undermanning, creating unique tasks to increase involvement, and assigning specific role responsibilities. It is possible that establishing goals prior to the generation of ideas may also be a solution to the social loafing effect. Future research is needed to address these questions.

Social loafing has unquestionable implications for organizational communication researchers. Social loafing has implications in group decision making, committee memberships, development of group norms, and the determination of the position of the group toward various issues (Brickner, Harkins, & Ostrom, 1986). Although this study did not utilize groups from a traditional organization, the results indicate the significance of this research area for organizational communication theorists. Future research will verify the specific implications of social loafing to the organizational context of group decision making.

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Footnotes

For data collection points one and three the tasks used were the following. "Assume that you are moving into a new apartment. What essential items would you need to buy? Please list each item separately." "Assume that you are entering college as a Freshmen. What essential items would you need to buy? Please list each item separately."

For data collection points two and four the tasks used were the following. "Assume that you are going grocery shopping. What items would you need to buy? Please list each item separately." "Assume that you are renting a vaction house at Padre Island. What grocery items would you need to buy? Please list each item separately."

Table 1

Mean and Standard Deviation for each Data Collection Point

Trial	Mean	Standard Deviation
I(1)	30.44	8.85
G(1)	19.27	6.62
I(2)	30.48	9.00
G(2)	24.00	8.82
I(3)	34.37	9.78
G(3)	22.72	9.72
I(4)	29.70	9.38
G(4)	26.81	9.97
I(S)	31.26	3.33
G(S)	23.40	4.49

I=Individual Score

G=Group Score

I(S)=Sum of Individual Scores divided by 4

G(S)=Sum of Group Scores divided by 4

Table 2

Dependent T-Test Tables

	T	N	PR>|T|
I(1) and G(1)	7.28	31	0.00005
I(2) and G(2)	3.80	31	0.00035
I(3) and G(3)	6.22	31	0.00005
I(4) and G(4)	1.54	31	0.0676
I(S) and G(S)	9.88	31	0.00005

Table 3

Post-Hoc T-tests

	T	N	PR>|T|
I(1) and I(3)	-1.33	31	0.1948
I(2) and I(4)	0.58	31	0.5645
G(1) and G(3)	-1.66	31	0.1087
G(2) and G(4)	-0.91	31	0.3732